



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3406 FAX (603) 271-7894



Mr. Michael Chrostowski
Troy Mills, Inc.
30 Monadnock Street
Troy, NH 03465

May 6, 2002
Letter of Deficiency
DAM #238.01
DAM #238.02

RE: Sand Pond Dam #238.01 and Village Pond Dam #238.02, Troy

Dear Mr. Chrostowski:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that plays a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, two inspections of the subject dams were conducted on December 7, 2001. During the visual inspections and/or file reviews, the following deficiencies were observed:

DAM #238.01:

1. There was brush and small tree growth along the downstream embankment of the dam between the left and right outlets and along the far left end of the downstream embankment;
2. There was erosion on both the left and right side of the primary spillway along the downstream embankment. Additionally, there was erosion on the right side of the secondary spillway at the right abutment of the dam;
3. There was a small amount of brush growing within the upstream stone face of the dam in several locations;
4. Most of the downstream toe of the dam is saturated, with no active seepage observed;
5. There was a small amount of debris within the downstream channel of the right outlet spillway;
6. There was a tree growing at the contact between the right downstream training wall and the concrete pad at the base of the left spillway;
7. There was a longitudinal crack along the entire width at the base of the left spillway with possible water intrusion below the concrete pad/apron. Additionally, at the left corner of the concrete pad/apron and downstream training wall the concrete was deteriorated and spalling;
8. The downstream slope of the embankment between the two spillways is steeper than 2.5 horizontal to 1 vertical and should be reduced for maintenance issues;
9. Stoplogs/flashboards were placed in all but 4 feet of the right spillway. The hydraulic analysis indicated that Sand Pond Dam does not pass the design storm event with the required 1-foot of freeboard. These boards should be removed to increase the safety of the dam during a major storm event; and
10. There is an operations and maintenance plan (O&M) on file with the DES. Please update the plan as necessary. See enclosed copy of what is currently on file.

DES believes that the above deficiencies can be corrected by performing the following items prior to the indicated schedule:

June 1, 2002:

1. Remove the small amount of debris within the downstream channel of the right outlet spillway;
2. Remove the stoplogs in the right spillway to increase the safety of the dam;
3. Update the O&M plan to reflect current procedures at Stone Pond Dam;

December 1, 2002:

4. Remove the brush and small tree growth along the downstream embankment of the dam between the left and right outlets and along the far end of the downstream embankment;
5. Repair the erosion on both the left and right side of the left spillway along the downstream embankment. Additionally, repair the erosion at the right abutment of the dam near the right spillway;
6. Remove the small amount of brush growing within the upstream stone face of the dam in several locations;
7. Remove the tree growing at the contact between the right downstream training wall and the concrete pad at the base of the left spillway;
8. Repair the concrete at the left spillway, which was cracked longitudinally along the entire width at the base of the spillway pad/apron, to reduce/eliminate the possible water intrusion below the pad/apron. Additionally, repair the left corner of the concrete pad/apron and downstream training wall where the concrete was deteriorated and spalling;
9. Upon removal of the brush and small tree growth along the downstream embankment of the dam between the left outlet and the right outlet re-grade the slope to be 2.5 horizontal to 1 vertical and develop an erosion resistant grass cover; and

On a continual basis:

10. Monitor the wet area along most of the downstream toe of the dam for signs of increased seepage or sloughing soils and report to our office if conditions degrade.

DAM #238.02:

1. There was debris in the downstream channel at the base of the spillway;
2. There was possible seepage at the base of the downstream right abutment. It should be noted that this flow could be coming from water overflowing the right corner of the spillway and exiting through the downstream rock rubble;
3. There were two large trees on the right upstream embankment within 10 feet of the upstream training wall;

4. The left downstream retaining wall is in poor condition and undermined up to approximately six feet behind the wall at the existing stream elevation approximately 35 feet downstream of the overflow spillway. It should be noted that concrete patches have previously been placed at the top of the wall adjacent to the stone masonry (possibly filling voids);
5. There was leaking through the right stone masonry wall within the sluiceway of the low-level outlet. Although the leak was quite substantial it appears that the flow is due to water overflowing the spillway along the left side and entering through the masonry block wall; and
6. A previous hydrologic study indicated that the spillway does not have adequate capacity. It appears upon conclusion of the analysis that this issue did not follow through to the LOD. However, from initial review of the analysis a substantial restriction at the upstream bridge may effectively reduce flows at the dam.

DES believes that the above deficiencies can be corrected by performing the following items prior to the indicated schedule:

DAM #238.02

July 1, 2002:

1. Remove the debris in the downstream channel at the base of the spillway;
2. Remove the two large trees on the right upstream embankment within 10 feet of the upstream training wall;
3. Develop a plan to replace/repair the left downstream retaining wall by December 1, 2002;
4. Due to high flow conditions and limited freeboard at the dam develop a plan to operate the low-level outlet before or during high flow events;
5. Update and test the Emergency Action Plan;
6. Update the attached operation and maintenance plan to reflect current conditions at the Troy Mills facility;

On a Continual Basis:

7. Investigate and monitor the possible seepage at the base of the downstream right abutment. As part of the investigation perform a dye test to determine the origin of the flow; and
8. Monitor the leakage from the right stone masonry wall within the sluiceway of the low-level outlet and repair as necessary.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Letter of Deficiency
Dam #238.01 and Dam #238.02
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Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the previous page.

Sincerely,

COPY

Dale F. Guinn, P.E.
Dam Safety Engineer

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY								
<ul style="list-style-type: none">■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	<table border="1"><tr><td>A. Received by (Please Print Clearly) <i>KEVIN WHEELER</i></td><td>B. Date of Delivery <i>5-9-02</i></td></tr><tr><td colspan="2">C. Signature <i>X [Signature]</i></td></tr><tr><td colspan="2"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</td></tr><tr><td colspan="2">D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</td></tr></table>	A. Received by (Please Print Clearly) <i>KEVIN WHEELER</i>	B. Date of Delivery <i>5-9-02</i>	C. Signature <i>X [Signature]</i>		<input type="checkbox"/> Agent <input type="checkbox"/> Addressee		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
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C. Signature <i>X [Signature]</i>									
<input type="checkbox"/> Agent <input type="checkbox"/> Addressee									
D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No									
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.									
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes									
1. Article Addressed to <i>Mr Michael Chrostowski Troy Mills Inc 30 Monadnock St Troy NH 03465</i>									
2. Article Number (Copy from service label) <i>7099 3400 0002 9773 7122</i>									

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Attachments Copies of O&M plan on file DB8, DB13
cc: Gretchen Rule

Town of Troy
Certified # *7099 3400 0002 9773 7122*
DFG/was/h:/safety/wendy/lod/238-01lod.doc

2099 3400

Total Postage & Fees	<i>\$ PUT on fur</i>
Name (Please Print Clearly) (to be completed by mailer)	
Street, Apt. No., or PO Box No.	
City, State, ZIP+4	

PS Form 3800, July 1999 See Reverse for Instructions